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EXAMINER

D AGOSTA, STEPHEN M

ART UNIT

PAPER NUMBER

2684

DATE MAILED: 01/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/558,008

Applicant(s)

HONKALA ET AL.

Examiner

Stephen M. D'Agosta

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5, 10.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION***Response to Arguments***

Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection (new prior art added).

1. The examiner acknowledges the addition of section headings and an abstract to document AND corrected drawings AND rewrites of claims 1, 13 and 14 regarding a 112 rejection. These corrections overcome the examiner's objections/rejections.

2. The examiner acknowledges amended claims 1-20 and new claim 21. Only claims 1, 13-14 and 20 show the claim modifications (the others are not shown since they are editorial in nature only).

3. The applicant argues (most of page 11) that Rautiola merely discloses a gateway arrangement for receiving traffic, a cellular radio network for use within an office environment, various systems connected to a LAN, translation of formats occurs between a single system and the LAN, no separation of processes that could result in a second gateway and gateways being used to connect systems together vs. to separate first and second types of traffic.

The examiner disagrees for the reason that the traditional use of the term "gateway" in data communications has stood to mean a software (or hardware) process (or device) that can connect dissimilar systems together. The examiner broadly interprets this to encompass co-located software processes or hardware devices as well as non co-located processes or devices. Hence, one device could perform the above limitations and/or multiple devices could perform the same limitations as is claimed by the applicant (extraction, translation and reassembly software would be required on the one gateway with multiple interfaces to the various different systems and/or multiple gateways would be required). The examiner interprets the use of one gateway as reading on the use of multiple gateways (which in the end, perform similar translations).

Also, said gateway could be located at various points between multiple systems as is argued by the applicant AND multiple gateways can be used instead of one for performance reasons (eg. receive better performance by using multiple gateways). The exact placement of Ratiola's invention could be adapted to be used in similar ways as that specifically claimed by the applicant.

Wynn Quon (GB-2315190A) teaches an Internet Telephony Gateway (ITG) that enables establishment of phone calls between a packet switched network carrying data packets and a circuit switched network carrying telephone signals that comprises a first and second interface unit (eg. gateway) [abstract]. The examiner interprets this to read on the applicant's gateway device since it uses multiple interface units/gateways and requires the extraction/reassembly of differing types of data types (ie. computer user can transmit data and voice over a packet link which would require extraction of voice data and translation to circuit-switched link to phone user. The computer data would be extracted and sent to another computer via a different packet link. Reference figures 6

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and 7 which show two interface units/gateways that connect to TCP/IP and telephone networks, hence extraction, translation and reassembly are required).

4. The applicant argues that Rautiola merely teaches translation of formats and no extraction from a first type of traffic AND a gateway connecting systems together AND a radio system (page 12). The examiner disagrees based upon the same answer in #3 above.

Response to Amendment

The amendment filed on 12-17-02 under 37 CFR 1.131 has been considered but is ineffective to overcome the Rautiola reference.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 7-12 and 15-20 rejected under 35 U.S.C. 103(a) as being unpatentable over Rautiola et al. U.S. Patent 5,949,775 (hereafter referred to as Rautiola).

As per **claims 1 and 20**, Rautiola teaches a gateway arrangement (figure 2, #1) for receiving traffic comprising a first type of traffic and a second type of traffic (ie. signaling/payload or computer or printer, etc. as shown in figure 2) **but is silent on** said gateway arrangement comprising:

- a first and second gateway
- first gateway being arranged to separate the first and second types traffic,
- said first type of traffic being output to said second gateway,
- said second gateway being arranged to extract information from said first type of traffic and output said information to the first gateway, and
- said first gateway having an output interface which is arranged to output the second type of traffic in accordance with said extracted information.

Rautiola teaches that multiple data types are present on the LAN (voice, computer application, printer, etc. – see figure 2) and can be transmitted to the mobile system/other MSC or PSTN/ISDN (figure 2) via the gateway (C5, L51-67 to C6, L1-67 to C7, L1-32). Since ONE gateway translates the LAN data format/coding into wireless data format/coding INTERNALLY (eg. within the computer), one skilled in the art would

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be able to separate those software routines and host them on different servers (eg. gateways) in order to distribute the processing load and/or distribute the two computers so they are not co-located which can be a single point of failure. *Note that Rautiola teaches multiple gateways in figure 3 (#1, #17 and #13). The examiner notes that one gateway could be used instead of multiple gateways – extraction, translation and reassembly software would be required on the one gateway with multiple interfaces to the various different systems and/or multiple gateways would be required.*

The examiner also points out that the use of a gateway along with a gatekeeper is well known in the art as well. The gatekeeper can be interpreted as a “second” gateway since it provides similar functions as that of the applicant’s second gateway (eg. data extraction/translation and control functions).

As a second known teaching, multiplexers are used to transport multiple data streams as one data stream whereby a second multiplexer demultiplexes the data into it’s component parts. Individual channels/streams can then have payload data (and/or routing information) extracted whereby it can be remultiplexed into another data stream for retransmission.

Wynn Quon (GB-2315190A) teaches an Internet Telephony Gateway (ITG) that enable establishment of phone calls between a packet switched network carrying data packets and a circuit switched network carrying telephone signals that comprises a first and second interface unit (eg. gateway) [abstract]. The examiner interprets this to read on the applicant’s gateway device since it uses multiple interface units/gateways and requires the extraction/reassembly of differing types of data types (ie. computer user can transmit data and voice over a packet link which would require extraction of voice and translation to circuit-switched link to phone user. The computer data would be extracted and sent to another computer via a different packet link. Reference figures 6 and 7 which show two interface units/gateways that connect to TCP/IP and telephone networks, hence extraction, translation and reassembly are required).

It would have been obvious to one skilled in the art at the time of the invention to modify Rautiola, such that there are two gateways and that data is extracted and inserted into the second data stream, to provide a multi-gateway system that distributes the processing load and/or alleviates a single point of failure.

As per **claim 2**, Rautiola teaches an arrangement as claimed in claim 1, **but is silent on** wherein the first and second gateways are connected to a connector and the first type of traffic is sent between said first and second gateways via said connector.

Having separated the software routines and placed them on separate computers, one skilled in the art would realize that said computers still require communications between themselves. The gateways would require a data link connection of some sort (eg. first and second gateways are connected to a connector and the first type of traffic is sent between said first and second gateways via said connector).

It would have been obvious to one skilled in the art at the time of the invention to modify Rautiola, such that there is a connection between the two computers, to provide data transmission between two/multiple gateways.

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As per **claim 3**, Rautiola teaches an arrangement as claimed in claim 2, **but is silent on** wherein said connector is provided by a local area network.

Rautiola teaches a gateway (figure 2, #1) which has a LAN interface. Hence, one skilled in the art would use a LAN interface to provide high speed communications when multiple gateways were used.

It would have been obvious to one skilled in the art at the time of the invention to modify Rautiola, such that a LAN connection is used, to provide high speed, industry standard communications.

As per **claim 4**, Rautiola teaches an arrangement as claimed in claim 1, **but is silent on** wherein the first and second gateways are connected directly to each other.

Rautiola shows depicts the LAN as Ethernet in figure 2 (eg. bus configuration). One skilled in the art realizes that there is contention on an Ethernet LAN which can cause delays/congestion during communication. Hence, one skilled in the art would use a direct connection between the two computers if the LAN was not providing ample throughput.

It would have been obvious to one skilled in the art at the time of the invention to modify Rautiola, such that the two gateways are directly connected, to provide an alternate data path that is not common/shared with other users' data.

As per **claim 5**, Rautiola teaches an arrangement as claimed in claim 1, wherein said first gateway is arranged to be connected to a mobile telecommunications network (figure 2, gateway #1 connects to a mobile system in upper left hand corner of the figure).

As per **claim 7**, Rautiola teaches an arrangement as claimed in claim 1, wherein said first gateway is arranged to be connected to a wired telecommunications network (figure 2, gateway #1 connects to LAN network in bottom of figure).

As per **claim 8**, Rautiola teaches an arrangement as claimed in claim 1, wherein each interface to the gateway is a bi-directional interface as provided by the LAN and/or other telecommunication links (figure 2). (eg. said output interface is also an input interface which arranged to receive first and second types of traffic signals).

As per **claim 9**, Rautiola teaches an arrangement as claimed in claim 1, wherein the gateway equipment transfers information between a LAN and a cellular radio network (C14, L19-26) supports signaling traffic as well (C5, L55-63, gateway is similar to a BSC which supports signaling traffic) (eg. interacts with the said first type of traffic is signaling traffic).

As per **claim 10**, Rautiola teaches an arrangement as claimed in claim 1, wherein said second type of traffic is user data which includes voice, different applications (database, email, etc.), fax, etc.. (C1, L42-63) [payload traffic].

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As per **claim 11**, Rautiola teaches an arrangement as claimed in claim 1, **but is silent on** wherein said first and second gateways are connected via a wired connection.

One skilled in the art realizes that the two/multiple gateways would require interconnection and such would either use a wired or wireless connection as required by the design constraints (note that the gateway of figure 2 supports wired connections via the LAN).

As per **claim 12**, Rautiola teaches an arrangement as claimed in claim 1, **but is silent on** wherein said first and second gateways are connected via a wireless connection.

One skilled in the art realizes that the two/multiple gateways would require interconnection and such would either use a wired or wireless connection as required by the design constraints (note that the gateway of figure 2 supports wireless connections [eg. cell, cordless, IR] -- wired LAN connections could be replaced with wireless LAN connections throughout (C13, L54-55)).

As per **claim 13**, Rautiola teaches an arrangement as claim in claim 1, **but is silent on** wherein a plurality of first gateways are provided for the second gateway.

Wynn Quon (GB-2315190A) teaches an Internet Telephony Gateway (ITG) that enable establishment of phone calls between a packet switched network carrying data packets and a circuit switched network carrying telephone signals that comprises a first and second interface unit (eg. gateway) [abstract]. The examiner interprets this to read on the applicant's gateway device since it uses multiple interface units/gateways and requires the extraction/reassembly of differing types of data types (ie. computer user can transmit data and voice over a packet link which would require extraction of voice and translation to circuit-switched link to phone user. The computer data would be extracted and sent to another computer via a different packet link. The computer data would be extracted and sent to another computer via a different packet link. Reference figures 6 and 7 which show two interface units/gateways that connect to TCP/IP and telephone networks, hence extraction, translation and reassembly are required).

The examiner puts forth that Rautiola teaches at least one gateway and Quon teaches multiple interface units/gateways, hence one skilled in the art would adapt Rautiola to have a plurality of first gateways for the second gateway.

It would have been obvious to one skilled in the art at the time of the invention to modify Rautiola, such that there are a plurality of first gateways provided for the second gateway, to ensure that performance objectives are met with multiple front-end gateway processors.

As per **claim 14**, Rautiola teaches an arrangement as claim in claim 13, **but is silent on** wherein eight of the first gateways are provided for the second gateway.

Wynn Quon (GB-2315190A) teaches an Internet Telephony Gateway (ITG) that enable establishment of phone calls between a packet switched network carrying data packets and a circuit switched network carrying telephone signals that comprises a first and second interface unit (eg. gateway) [abstract]. The examiner interprets this to

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read on the applicant's gateway device since it uses multiple interface units/gateways and requires the extraction/reassembly of differing types of data types (ie. computer user can transmit data and voice over a packet link which would require extraction of voice and translation to circuit-switched link to phone user. The computer data would be extracted and sent to another computer via a different packet link. Reference figures 6 and 7 which show two interface units/gateways that connect to TCP/IP and telephone networks, hence extraction, translation and reassembly are required).

The examiner puts forth that Rautiola teaches at least one gateway and Quon teaches multiple interface units/gateways, hence one skilled in the art would adapt Rautiola to have eight of the first gateways for the second gateway.

It would have been obvious to one skilled in the art at the time of the invention to modify Rautiola, such that there are eight first gateways provided for the second gateway, to ensure that performance objectives are met with multiple front-end gateway processors.

As per **claim 15**, Rautiola teaches an arrangement as claimed in claim 1, **but is silent on** wherein said first gateway is arranged to alter the coding of said second type of traffic.

Rautiola teaches that the gateway provides protocol conversion of the data (C5, L51-67 to C6, L1-9, primarily C6, L1-3). One skilled in the art also realizes the gateway (figure 2, #1) is connected to two dissimilar networks (ie. cellular/MSC and LAN) which use different coding techniques. Hence one skilled in the art knows that the gateway provides coding conversion as well in order for the two dissimilar networks to communicate.

As per **claim 16**, Rautiola teaches an arrangement as claimed in claim 1, wherein the gateway is arranged to alter the protocol of said first type of traffic (C5, L51-67 to C6, L1-9, primarily C6, L1-3) **but is silent on** wherein said second gateway.

As per claim 1 above, one skilled in the art would separate one gateway into two gateways for distributed processing and/or to alleviate any single point of failures.

As per **claim 17**, Rautiola teaches an arrangement as claimed in claim 1 and the use of many different types of communication links/systems (C5, L64-66 or C13, L64-67), each of which could be used to provide transmission of data. [eg. wherein said output interface is in accordance with the ETSI E1 standard]. Note that one skilled in the art would also use fractional T1, T1, T3 and/or other high rate industry standard communication links as well.

As per **claim 18**, Rautiola teaches an arrangement as claimed in claim 1, wherein said gateway arrangement is provided between a GSM environment (C5, L10-24) and an IP environment (C6, L10-19).

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As per **claim 19**, Rautiola teaches an arrangement as claim in claim 1, **but is silent on** wherein said extracted information is at least one of time slot and address information.

Rautiola teaches the gateway providing data translation so that a LAN can connect to a mobile/GSM cellular network. Rautiola teaches a TCP/IP network (C6, L10-19) which would require the IP Address to be extracted so that user A can contact user B (eg. an IP address is unique and must be used for routing).

Rautiola also teaches TDMA (C6, L36-38) which utilizes time slots for data transmission (eg. one needs to understand which timeslot is being used).

It would have been obvious to one skilled in the art at the time of the invention to modify Rautiola, wherein said extracted information is at least one of time slot and address information, to provide communication between users of two different communication systems to interact.

As per **claim 21**, Rautiola teaches an arrangement as claim in claim 1, **but is silent on** wherein the gateway arrangement further comprises a plurality of second gateways.

Wynn Quon (GB-2315190A) teaches an Internet Telephony Gateway (ITG) that enable establishment of phone calls between a packet switched network carrying data packets and a circuit switched network carrying telephone signals that comprises a first and second interface unit (eg. gateway) [abstract]. The examiner interprets this to read on the applicant's gateway device since it uses multiple interface units/gateways and requires the extraction/reassembly of differing types of data types (ie. computer user can transmit data and voice over a packet link which would require extraction of voice and translation to circuit-switched link to phone user. The computer data would be extracted and sent to another computer via a different packet link. Reference figures 6 and 7 which show two interface units/gateways that connect to TCP/IP and telephone networks, hence extraction, translation and reassembly are required).

The examiner puts forth that Rautiola teaches at least one gateway and Quon teaches multiple interface units/gateways, hence one skilled in the art would adapt Rautiola to have a plurality of second gateways.

It would have been obvious to one skilled in the art at the time of the invention to modify Rautiola, such that there are a plurality of second gateways, to ensure that performance objectives are met with multiple back-end gateway processors.

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Claim 6 rejected under 35 U.S.C. 103(a) as being unpatentable over Rautiola as applied to claim 5 above, and further in view of Rautiola et al. U.S. Patent 5,956,331 (hereafter referred to as **Rautiola #2**).

As per **claim 6**, Rautiola teaches an arrangement as claimed in claim 5, **but is silent on** wherein first gateway has a second interface for connecting to said mobile telecommunications network.

Rautiola #2 teaches an integrated radio communication system (title) that utilizes a gateway with multiple connections (ie. to an MSC, PSTN/ISDN, Internet and wireless LAN). One skilled in the art would provide multiple connections to any of these systems if performance was degraded based upon user traffic and/or control signaling traffic.

It would have been obvious to one skilled in the art at the time of the invention to modify Rautiola, wherein the gateway has a second (or multiple) connection(s) to a mobile network, to provide additional throughput if there was performance degradation based upon increased user/control traffic.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. D'Agosta whose telephone number is 703-306-5426. The examiner can normally be reached on M-F, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Hunter can be reached on 703-308-6732. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist on 703-306-0377.

SMD 
January 22, 2003





1/27/03